PATENT
Attorney Docket No. STAC-00301

SYSTEM FOR STYLING HAIR

FIELD OF THE INVENTION:

The invention relates to hair styling systems and methods. More specifically, this invention relates to a hair styling systems and methods for creating hair styles with complex geometric parts.

RELATED APPLICATIONS:

This Patent Application is a continuation-in-part of the co-pending U.S. Patent Application Serial Number 09/549, 764, filed April 14, 2000, and entitled "Device for Hair Styling Hair". The Application Serial Number 09/549, 764, filed April 14, 2000, and entitled "Device for Hair Styling Hair" is hereby incorporated by reference.

BACKGROUND OF THE INVENTION:

Hair styling often involves manipulating hair into a preferred orientation or style and securing the hair in that preferred orientation or style. This current invention is a device for manipulating hair into a preferred orientation or style by parting or separating sections of hair. Hair is usually parted or separated with a comb or a brush. It can be difficult to obtain a straight part or a consistent part with theses well known devices. It is even more difficult to create a complex part in hair such as a curved or a zig-zag part. In order for make a zig-zag part, for example, with a comb or a brush, each section of hair must be carefully combed or brushed and then separated. The current invention provides a device and method for creating complex parts in a hair style quickly and easily.

SUMMARY OF THE INVENTION:

The system and method of the instant invention allow a user to create hair styles with complex parts. Preferably, the system and method of the instant invention utilize a stencil with a patterned edge also referred to, herein, as a styling edge. The styling edge of the stencil is used as a guide for the user to trace the pattern of the styling edge through an area of hair and to create a part in the hair with a pattern that is substantially similar to the styling edge of the stencil. The pattern is traced though the hair with any suitable parting device that can closely follow or trace the pattern on the styling edge of the stencil

through the hair and then separated the hair according to the pattern.

The styling stencil is preferably a flattened elongated stencil with an average length between 5 and 30 cm, an average width between of 2 to 10 cm and an average thickness between 0.1 and 1cm. The styling stencil is formed from a resilient material such as plastic, polyurethane or rubber and is capable of conforming to the curvature of a human head. The system and method of the instant invention utilizes one styling stencil or a plurality of styling stencil to create hair styles with complex parts.

The styling edge of the stencil is patterned or contoured with any number of geometric shapes but is preferably contoured with repeating geometric shapes such rounded scallops, squared teeth or pointed teeth. The styling edge of the stencil is preferably an outer edge of the stencil. Alternatively, the styling edge is any edge of a stencil that is traceable with a parting device and suitably configured to create hair styles with parts.

In operation the stencil device is paced over an area of hair to be parted. The stencils is held against the head of the user or the head of the person whose hair is being styled. The pattern of the styling edge is traced through the hair with the parting device. The pattern is preferably traced through the hair near the scalp of the user to obtain a high resolution part. Most preferably, the pattern is traced through the hair with a pointed or tip-shaped parting device that is moved through the hair with the tip portion of the device pointing in a forward tracing direction. Either while the pattern is being traced or after the tracing is complete, the hair is separated along the trace to create a hair style with a part that has a pattern substantially similar to the patterned edge of the stencil device. Preferably, the parting device is used to trace the pattern through the hair and to separate the hair as described in detail below.

Preferably, the parting device has a tip portion for tracing the part through the hair and a handle or body portion for separating the hair. The parting device is preferably flared from the tip portion to the handle portion. As the tip portion moved through the hair, with the tip pointed in a forward tracing direction, the hair flows over the handle or body portion and is partially separated. After the tracing is complete, the hair is completely separated by lifting the parting device through the hair.

In a preferred embodiment of the invention the parting device has movable handles that open and close to further facilitate the separating of the hair about the part

after the pattern is traced through the hair. Accordingly, two handles are hingably attached to the tip portion and the handles open and close in a "jaw-like" fashion. The tip portion of the parting device is moved through the hair near the scalp, as described above, with the handles in a closed position. After the pattern is traced through the hair, the hair is further separated by lifting the parting device through the hair and placing the handles in the open position.

According to further embodiments of the invention the parting device has a solid extended tip section and two elongated handles. The elongated handles are attached by one of their ends to the tip section such that the handles are capable of being opened and closed in a "jaw-like" fashion about the solid tip section. The handles are preferably flattened and substantially planar with enlarged or flared grasping ends. Preferably, the solid tip section is also flattened and is co-planar with the handles. In an alternative embodiment, the tip section is angled. The angle of the tip, relative to the handles or the plane formed by the handles, is preferably less than 45 degrees.

Each of the two handles of the parting device are attached to the tip portion through a hinge element which allow the handles to be opened and closed. The hinge elements are any hinge elements known in the art, such as hinge pins, which interlock rotatable parts. The hinge elements may also include tension coil springs that urge the handles to return to the open or the closed position in the absence of an applied force. Alternatively, the hinge elements are leaf spring made of a resilient deformable material, wherein the handles are placed in the opened or closed position by deforming the leaf spring.

The parting device is either a monolithic device or is formed in parts. Preferably the parting device is formed from a resilient material such as plastic, rubber or polyurethane. However, it will be clear to one skilled in the art that the device or portions thereof can also be made from other materials including metal and any combination of the aforementioned materials.

According to one embodiment of the invention the hinge elements are leaf springs are provided by a modified structure at the hinging points in the monolithic device. For example, by having reduced thicknesses of the resilient material at the hinging points, the handles will bend through these points when a deforming force is applied to the handles. Further, the handles will return their original resting position in

the absence of the applied force.

In another embodiment of the invention the system of the invention includes a grooming element such as a comb or a brush section that is detachably fixed to the parting device. In this way the parting device can serve as the handle for the attached comb or brush which can then be removed when using the parting device to part hair.

In other embodiments, the complete parting device or a portion of the parting device functions as a hair pin. For example, in one embodiment of the invention, at least one handle is detachable from the tip portion of the parting device. The detached handle of the parting device is then free to be used as a hair pin.

In still another embodiment of the invention the parting device has a locking mechanism to secure the device in a closed position. The locking mechanism preferably secures the handles in the closed position near the unattached or free ends of the handles. The locking mechanism is preferably a hook that hinges on one of the handles and is capable of wrapping around a portion or a receiving a section of the other handle when the handles are in the closed position. Further, providing the adjacent interior surfaces of the handles with small teeth allows the parting device to secure a section of hair between the handles while the handles are in the closed position and are secured, thus providing for a parting device that is also capable of being used as a hair clip.

In still another embodiment of the invention the parting device has a spring element that is in contact with both handles for urging the handles to the open position. In this embodiment of the invention, the parting device is capable of being held in the closed position with one hand and is allowed to open without using the another hand. This embodiment allows a hair stylist to create a complex hair parts with one hand while leaving the other hand free to perform other tasks such as securing or holding the styling stencil in place.

In alterative embodiments, the parting device has two handle sections that are connected together by a single hinge element or no hinge. In these embodiment the ends of the handles form the tip section of the parting device. Whether the parting device used in the system and method of the instant invention has no hinge, a single hinge or two hinges, a part in the hair is created by providing a stencil with a predetermined pattern along the styling edge of the stencil. The stencil is placed on the section of hair to be styled. With the tip section of the parting pointed forward, the tip section is guided or

traced through a section of hair near the scalp and along a styling edge of a stencil, such that ir flows over the parting device. Separating the hair either during the trace or after the trace results in hair part with a geometric shape that is substantially similar to the styling edge of the stencil.

BRIEF DESCRIPTION OF THE DRAWINGS:

Fig. 1 shows a parting device according to the current invention with detachable comb section.

Fig. 2a shows a parting device with leaf spring hinges in accordance with present invention.

Fig. 2b shows a parting device in accordance with a preferred embodiment of the present invention.

Fig. 3 shows a parting device that is also capable of being used as a hair clip and a hair pin, in accordance with the present invention.

Fig. 4 a-b illustrate straight and bent tip sections of a parting device.

Fig. 5 a-c illustrate top views of parts in hair.

Fig. 6a-d illustrate the dimensions of a styling stencil and contoured styling edges of stencils in accordance with the current invention.

Fig. 7a-d illustrate stencils with patterned styling edges in accordance with the current invention.

Fig. 8 illustrates a stencil with multiple patterned styling edges in accordance with the current invention.

Fig. 9 shows a set of stencils with patterned styling edges.

Fig. 10a-b illustrate the placement of a stencil with a styling edge on an area of hair and a resultant geometric part formed in accordance with the method of the instant invention.

Fig. 11 shows a hair style being created utilizing the system and method of the instant invention.

DETAILED DESCRIPTION OF THE INVENTION:

Figure 1 illustrates a parting device **100** according with an embodiment of the current invention. The device **100** has two elongated handles **111** and **111'** that are

connected together at one end of each handle **120** and **121** through a hinge element **103**. The ends **120** and **121** form a tip section **101** that is used to guide the parting device through hair to form a part in the hair. The device **100** is capable of being placed in an open position (as shown) and place in a closed position (not shown) by separating the handles **111** and **111'** and bring the handles together in a "jaw-like" fashion as indicated by the arrow **119**. The tip section **101** preferably does not open or close or become in anyway separated while moving the handles **111** and **111'** as described. This is accomplished in any number of ways. One way to accomplish this goal is by attaching the handles **111** and **111'** through a hinge element at the very ends **120** and **121** of the handles **111** and **111'** such that the hinge and the tip section of the device are the same (not shown). Alternatively, the attached ends **120** and **121** of the handles **111** and **111'** are flattened, curved and overlapping such that a gap does not form at the tip section **101** during the opening and closing of the handles **111** and **111'**.

Again referring to **Figure 1**, the handles are equipped with finger pads **113** and **113'** for grasping and positioning the parting device **100** in the opened and closed positions. According to a further embodiments of the invention, the parting device **100** has a spring element **105** position between the handles **111** and **111'** for urging the handles **111** and **111'** to separate to the open position. In yet another embodiment of the invention the device **100** has a locking element for securing the device **100** in the closed position. A latch **115** is attached to the handle **111**. A receiving post **117** is attached to the other handle **111'**. The device **100** is placed in the closed position and the latch **115** is folded over and onto the receiving post **117** and thus securing the device in the closed position. While a two part locking element is preferred, a simple hook attached to one handle that is capable of looping around the other handle in order to secure and lock the handles in the closed position is considered to be within the scope of the invention.

In an alternative embodiment of the invention, a grooming element **109** such as a comb or a brush section is attached to a portion **107** of the parting device handle **111'**. Preferably the grooming element **109** is detachable fixed to the portion **107** of the handle **111'** and can be removed when using the parting device **100** to create parts in hair. The grooming element **109** is detachably fixed to a portion of the handle **107** by any suitable means including two piece interlocking snaps or hook and loop fabric interlocks. Alternatively, the grooming element **109** may be slidably positioned into to a grove on

the side of the handle **107** such that sliding the grooming element **109** in one direction or the other direction along the length of the handle **111'**, as indicated by the arrow **123**, allows the element to be released from the handle **111'**.

In preferred embodiments of the invention the hair styling parting device **200** has two handles that are independently attached to a tip section, as shown in **Figure 2a**. Preferably, the handles **211** and **209** are flared at grasping ends and are reticulated as shown for providing both beauty and function to the parting device **200**. The tip section **201** is used to guide the parting device **200** through hair during a styling operation. The handles **209** and **211** move in the directions **213** and **215** through the hinge elements **203** and **205** , respectfully. By moving the handles **209** and **211** towards each other the parting device will assume a closed position, as shown, and by separating the handles apart from each other the parting device **200** is placed an open position. Upon releasing the handles **209** and **211** the parting device **200** will preferably return to the closed position.

Hinge elements used in the parting device of the current invention are any hinge elements that are known in the art including hinge pins, hinge pins that are couple with tension coil springs or hinge screws. Hinge pins coupled with tension coil springs are used to urge the handles to assume a closed or open position in the absence of an applied force.

In an embodiment of the current invention, the invention the parting device **200** is monolithic, wherein the tip section **201**, the hinge elements **203 / 205** and the handles **209/211** are formed from a single resilient pliable material such as plastic, rubber or polyurethane. Accordingly, the hinge elements **203** and **205** are thin pieces of the resilient pliable material connecting the thicker tip section **201** and the t handles **209/211** such that the hinge elements **203** and **205** flex or bend when handles **209** and **211** are pulled apart or drawn together.

While the parting device **200** is shown as a monolithic parting device, it will be clear to one skilled in the art that the parting device **200** may be made of several parts and using any number of different materials. For example, in an alternative embodiment the handles **209/211** and tip section **201** are plastic connected together through metal leaf spring hinge elements. The device **200** is configured with a latch mechanism **217** and **219** securing the device **200** in the closed position during storage.

Now referring to **Figure 2b**, the parting device **225** has a plastic tip section **226** with hollow inserts, shown by the dotted lines **244/245**, for inserting and attaching ends **227/228** of the handle sections **230/ 231**, respectively. The handle sections **230/231** are then held fixed to the tip section **226** with hinge screws **232/233**. The handles are capable of opening and closing in a jaw like fashion through the screw hinges **232/233** as described previously. Alternatively, the attaching ends **227/228** of the handle sections **230/ 231** are configured to fit over a portion of the tip section **226** section or are adapted to attach to the tip section **226** such that the handles **230/ 231** open and close.

Figure 3 shows a parting device **250** incorporating several alternative embodiments according to the present invention. The parting device **250** has two handles **255** and **257** that are hingably attached by a hinge section **253** to a tip section **251**, wherein the handles **255** and **257** open and close in a "jaw-like" fashion as described previously. The parting device **250** also has a two part pressure snap mechanism comprising a female portion **261** and male portion **263** that snap together and secure that parting device **250** in a closed position. The handle **255** is capable of being detached at the insert joint **260** from the rest of the parting device and is capable of being used as a hair pin. Further, adjacent interior portions **265/267** of the handles **255/257** have teeth for holding hair between the handle with the parting device **250** secured in the closed position. Thus the parting device **250** may also be used as a hair clip when it is not being used to style hair.

Figure 4a shows a perspective view **300** of a portion of the parting device **200** shown in **Figure 2**. The tip section **201** is flattened and coplanar with the handles **209** and **211**. **Figure 4b** shows a perspective view **350** a portion of the parting device according to an alterative embodiment. The tip section **351** is angled out of the plane formed by the handles **353** and **355**. An angled tip configuration, such as illustrated in **Figure 4b**, helps to ensure that the tip section **351** is guided through the hair and near the scalp while creating a hair style. Tip sections, in accordance wit the instant invention, are configured to have any angle **357** relative to the plane formed by the attached handles **353** and **355** that is less than 45 degrees. The tip section is configured to be rigid or alternatively is configured to be movable and assume a range of angles **357** during use.

The parting devices illustrated in the **Figures 1-4** are used to create any number of hair styles with parts. For illustrative purposes, a few hair styles that are capable of being

created with the parting devices described in **Figures 1-4** are shown in **Figures 5a-c**. **Figure 5a** shows a top view **400** of a the head **401** with hair that is parted in a straight line **403** using the parting device of the current invention. **Figure 5b** shows a top view **425** of a head **426** with hair that is parted at an angle **428** using the parting device. **Figure 5c** shows a top view **450** a head **451** with hair that is parted in a zig-zag fashion **453** using the parting device. According to the instant invention the ability to create hair styles with complex geometric parts or with high definition parts is enhanced by the use of a stencil described in detail below.

Figure 6a illustrates the gross dimensions of a stencil device **800** in accordance with the instant invention. The body **801** of the stencil device is preferably flattened and elongated. The dimensions of the stencil body **801** can vary throughout the stencil device but preferably the average length **L** is between 5 and 30 cm, the average width **W** is between of 2 to 10 cm and the average thickness **T** is between 0.1 and 1cm. The edge **803** of the body **801** is contoured or patterned to facilitate parting of hair. Styling stencils, in accordance with the instant invention, can have any number of shapes and sizes with any number of contoured or patterned edges to facilitate the parting of hair. The styling stencils utilized in the system and the method of the invention are preferably formed from a flexible and resilient material such as plastic, polyurethane or rubber. The styling stencils are is capable of conforming to the curvature of a human head and return to a flattened elongated state after use. Alternatively, styling stencils are formed from resilient or a rigid materials and exhibit natural or permanent curvature that allows the user to place the stencil on or over hair to be styled.

Figure 6b illustrates a stencil device **810** with a stencil body **811** and a sloping styling edge **813**. The sloping styling edge **813** of the stencil **810** is used in the system and method of the instant invention to create hair styles with hair that have slope-shaped parts. **Figure 6c** illustrates a stencil device **815** with a stencil body **816** and a concave styling edge **818**. The stencil device **815** is used in the system and method of the instant invention to create hair styles with curved parts. Alternatively, as shown in the **Figure 6d,** the stencil device **820** has a stencil body **821** and a convex styling edge **823** that is used to create hair styles with curved parts.

Styling edges of the stencils used in the instant invention are patterned or contoured with any number of geometric shapes. For example, **Figure 7d** illustrates a

stencil device **840** with a stencil body **841** and a styling edge **846** that is patterned with and an elongated rectangle **842**, a pointed tooth **843**, a square tooth **844** and a curved tooth **845** protrusion. Preferably, the styling edges of the stencils are patterned with a plurality of repeating geometric shapes such as rounded scallops, squared teeth or pointed teeth, as shown in **Figures 7a-7c.**

Figure 7a shows a stencil device **825** with a stencil body **826** and a styling edge **827** that is patterned with a plurality of rounded scallops. **Figure 7b** shows a stencil device **830** with a stencil body **831** and styling edge **832** patterned with a plurality of pointed teeth. **Figure 7c** shows a stencil device **835** with a stencil body **836** and a styling edge **837** patterned with squared teeth. It will be clear to one of average skill in the art that a stencil device in accordance with the instant invention can have any number of shapes and sizes and have any number of patterned edges.

In an alterative embodiment of the invention the stencil device is patterned on more than one edge. **Figure 8** illustrates a stencil device **900** in accordance with the instant invention. The stencil device **900** has a stencil body **901** with patterned edges **902** and **904**. Both of the edges **902** and **904** are shown here with a similar patterns. However, the edges **903** and **904** can be contoured or pattern with different shapes and frequencies of protrusions. Further, stencil devices form a frame such that the patterned edge or edge of the stencil is an interior edge.

Figure 9 shows a set **950** of stencils **951**, **953** and **955** that are attached by a hinge element **957** or any other suitable means. They stencils **951**, **953** and **955** are permanently attached through the hinge element **957** or alternatively are removably attached through the hinge element **957**. Preferably, the stencils **951**, **953** and **955** are rotatable about each other so that each stencil is capable of being used individually in a styling operation. The stencil **951** has a pointed tooth patterned styling edge **952**, the stencil **953** has a square tooth patterned styling edge **954** and the stencil **955** has a rounded scallop patterned styling edge **956**, similar to those described previously. Again, it will be clear from the previous discussion that a stencil, in a set of stencils, such as shown in **Figure 9**, can have any number of shapes and sizes and that one or more edges may be patterned or contoured to facilitate the parting of hair.

Figure 10a illustrates a top perspective view **957** of a stencil device **976** placed in a styling position on top of a head of hair **977**. The stencil device **976** is shown in **Figure**

10a as being placed in a styling position with the styling edge **981** of the stencil device **976** near to and parallel with the natural part **978** of the hair **977**. However, the method described below is used to part any portion of the hair **977**. Further, the method of the instant invention can be used to part hair in any orientation including orientations that are not parallel with the natural part **978** of the hair **977**.

Still referring to **Figure 10a**, the part is created by tracing the styling edge **981** of the stencil device **976** with a tip portion of a parting device (not shown). The tip portion of the parting device is pointed in a forward tracing direction as it is moved through the hair **977** along the patterned edge **981** of the stencil device **976**. The hair **977** can be partied by tracing any direction along the patterned edge **981** of the stencil **976** such as front-to-back or back-to-front as long as the tip portion of the parting device is pointed in a forward tracing direction whereby the tip portion is traced through the hair.

Now referring to **Figure 10b**, after the pattern of the stencil is traced through the hair **977** with the parting device, then the hair **977** is separated along the trace to create a hair style with a part **980**. The part **980** of the hair **977** has a pattern that is substantially similar to the patterned edge **981** of the stencil device **976** shown in the **Figure 10a**. Penetrably, the pattern of the styling edge **981** is traced out thought the hair **977** near the scalp of the user to obtain a high resolution part **980**.

Figure 11 illustrates a perspective view of a persons hair **550** being parted with a with a stencil device **551** and a parting device **505** according to the method of the instant invention. The stencil **551** is place on an area of the hair **550** where the part is desired. The parting device **505** is held in the closed position **501** and the tip section **506** is placed in the hair, near to the scalp and pointing in a forward direction. The parting device is moved through the hair **550** along the styling edge **507** of the stencil **551** tracing the pattern of the styling edge **507**. As the tip section **507** of the parting device **505** threads through the hair **550** along the styling edge **507** of the stencil **551**. The hair **550** will flow over the handles **509/511** of the device **505** and collect thereon. Once the trace of the part is complete, the parting device **505** is paced in the open position, thereby separating the hair **550** to create a part in the hair **550** with a pattern substantially similar to the patterned edge **507** of the stencil **551**.

The parting device is not required to open and close, as described above, in order to practice the invention. Alternatively, a non-hinging parting device is used.

Accordingly, once the pattern is traced through the hair then lifting the parting device through the hair separates the hair. The step of separating the hair is, however, facilitated if the parting device has a tapered body portion, such shown in the **Figure 2a** and the step of separating the hair is further facilitated if the parting device has handles which open and close as described above.

The present invention has been described in terms of specific embodiments incorporating details to facilitate the understanding of the principles of construction and operation of the invention. Such reference herein to specific embodiments and details thereof is not intended to limit the scope of the claims appended hereto. It will be apparent to those skilled in the art that modifications can be made in the embodiment chosen for illustration without departing from the spirit and scope of the invention. Therefore it is understood that the present invention could be implemented in several different ways and have several different appearances.